Syllabus

NOTE: Where it is feasible, a syllabus (headnote) will be released, as is being done in connection with this case, at the time the opinion is issued. The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States* v. *Detroit Timber & Lumber Co.*, 200 U. S. 321, 337.

SUPREME COURT OF THE UNITED STATES

Syllabus

MICROSOFT CORP. *v.* AT&T CORP.

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

No. 05–1056. Argued February 21, 2007—Decided April 30, 2007

It is the general rule under United States patent law that no infringement occurs when a patented product is made and sold in another country. There is an exception. Section 271(f) of the Patent Act, adopted in 1984, provides that infringement does occur when one "suppl[ies] . . . from the United States," for "combination" abroad, a patented invention's "components." 35 U. S. C. §271(f)(1). This case concerns the applicability of §271(f) to computer software first sent from the United States to a foreign manufacturer on a master disk, or by electronic transmission, then copied by the foreign recipient for installation on computers made and sold abroad.

AT&T holds a patent on a computer used to digitally encode and compress recorded speech. Microsoft's Windows operating system has the potential to infringe that patent because Windows incorporates software code that, when installed, enables a computer to process speech in the manner claimed by the patent. Microsoft sells Windows to foreign manufacturers who install the software onto the computers they sell. Microsoft sends each manufacturer a master version of Windows, either on a disk or via encrypted electronic transmission, which the manufacturer uses to generate copies. Those copies, not the master version sent by Microsoft, are installed on the foreign manufacturer's computers. The foreign-made computers are then sold to users abroad.

AT&T filed an infringement suit charging Microsoft with liability for the foreign installations of Windows. By sending Windows to foreign manufacturers, AT&T contended, Microsoft "supplie[d] . . . from the United States," for "combination" abroad, "components" of AT&T's patented speech-processing computer, and, accordingly, was liable under §271(f). Microsoft responded that unincorporated soft-

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ware, because it is intangible information, cannot be typed a "component" of an invention under §271(f). Microsoft also urged that the foreign-generated copies of Windows actually installed abroad were not "supplie[d] . . . from the United States." Rejecting these responses, the District Court held Microsoft liable under §271(f), and a divided Federal Circuit panel affirmed.

Held: Because Microsoft does not export from the United States the copies of Windows installed on the foreign-made computers in question, Microsoft does not "suppl[y] . . . from the United States" "components" of those computers, and therefore is not liable under §271(f) as currently written. Pp. 7–19.

(a) A copy of Windows, not Windows in the abstract, qualifies as a "component" under §271(f). Section 271(f) attaches liability to the supply abroad of the "components of a patented invention, where *such components* are uncombined in whole or in part, in such manner as to actively induce the combination of *such components*." §271(f)(1) (emphasis added). The provision thus applies only to "such components" as are combined to form the "patented invention" at issue—here, AT&T's speech-processing computer. Until expressed as a computer-readable "copy," *e.g.*, on a CD-ROM, Windows—indeed any software detached from an activating medium—remains uncombinable. It cannot be inserted into a CD-ROM drive or downloaded from the Internet; it cannot be installed or executed on a computer. Abstract software code is an idea without physical embodiment, and as such, it does not match §271(f)'s categorization: "components" amenable to "combination." Windows abstracted from a tangible copy no doubt is information—a detailed set of instructions—and thus might be compared to a blueprint (or anything else containing design information). A blueprint may contain precise instructions for the construction and combination of the components of a patented device, but it is not itself a combinable component.

The fact that it is easy to encode software's instructions onto a computer-readable medium does not counsel a different answer. The copy-producing step is what renders software a usable, combinable part of a computer; easy or not, the extra step is essential. Moreover, many tools may be used easily and inexpensively to generate the parts of a device. Those tools are not, however, "components" of the devices in which the parts are incorporated, at least not under any ordinary understanding of the term "component." Congress might have included within §271(f)'s compass, for example, not only a patented invention's combinable "components," but also "information, instructions, or tools from which those components readily may be generated." It did not. Pp. 9–12.

(b) Microsoft did not "suppl[y] . . . from the United States" the for-

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eign-made copies of Windows installed on the computers here involved. Under a conventional reading of §271(f)'s text, those copies were "supplie[d]" from outside the United States. The Federal Circuit majority concluded, however, that for software components, the act of copying is subsumed in the act of supplying. A master sent abroad, the majority observed, differs not at all from exact copies, generated easily, inexpensively, and swiftly from the master. Hence, sending a single copy of software abroad with the intent that it be replicated invokes §271(f) liability for the foreign-made copies. Judge Rader, dissenting, noted that "supplying" is ordinarily understood to mean an activity separate and distinct from any subsequent "copying," "replicating," or "reproducing"—in effect, manufacturing. He further observed that the only true difference between software components and physical components of other patented inventions is that copies of software are easier to make and transport. But nothing in §271(f)'s text, Judge Rader maintained, renders ease of copying a relevant, no less decisive, factor in triggering liability for infringement. The Court agrees. Under §271(f)'s text, the very components supplied from the United States, and not foreign-made copies thereof, trigger liability when combined abroad to form the patented invention at issue. While copying software abroad is indeed easy and inexpensive, the same can be said of other items, such as keys copied from a master. Section 271(f) contains no instruction to gauge when duplication is easy and cheap enough to deem a copy in fact made abroad nevertheless "supplie[d] . . . from the United States." The absence of anything addressing copying in the statutory text weighs against a judicial determination that replication abroad of a master dispatched from the United States "supplies" the foreign-made copies from this country. Pp. 12–14.

(c) Any doubt that Microsoft's conduct falls outside §271(f)'s compass would be resolved by the presumption against extraterritoriality. Foreign conduct is generally the domain of foreign law, and in the patent area, that law may embody different policy judgments about the relative rights of inventors, competitors, and the public. Applied here, the presumption tugs strongly against construing §271(f) to encompass as a "component" not only a physical copy of software, but also software's intangible code, and to render "supplie[d] . . . from the United States" not only exported copies of software, but also duplicates made abroad. Foreign law alone, not United States law, currently governs the manufacture and sale of components of patented inventions in foreign countries. If AT&T desires to prevent copying abroad, its remedy lies in obtaining and enforcing foreign patents. Pp. 14–16.

(d) While reading §271(f) to exclude from coverage foreign-made

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copies of software may create a "loophole" in favor of software makers, the Court is not persuaded that dynamic judicial interpretation of §271(f) is in order; the "loophole" is properly left for Congress to consider, and to close if it finds such action warranted. Section 271(f) was a direct response to a gap in U. S. patent law revealed by *Deepsouth Packing Co.* v. *Laitram Corp.*, 406 U. S. 518, where the items exported were kits containing all the physical, readily assemblable parts of a machine (not an intangible set of instructions), and those parts themselves (not foreign-made copies of them) would be combined abroad by foreign buyers. Having attended to that gap, Congress did not address other arguable gaps, such as the loophole AT&T describes. Given the expanded extraterritorial thrust AT&T's reading of §271(f) entails, the patent-protective determination AT&T seeks must be left to Congress. Cf. *Sony Corp. of America* v. *Universal City Studios, Inc.*, 464 U. S. 417, 431. Congress is doubtless aware of the ease with which electronic media such as software can be copied, and has not left the matter untouched. See the Digital Millennium Copyright Act, 17 U. S. C. §1201 *et seq.* If patent law is to be adjusted better to account for the realities of software distribution, the alteration should be made after focused legislative consideration, not by the Judiciary forecasting Congress' likely disposition. Pp. 17–19.

414 F. 3d 1366, reversed.

GINSBURG, J., delivered the opinion of the Court, except as to footnote 14. SCALIA, KENNEDY, and SOUTER, JJ., joined that opinion in full. ALITO, J., filed an opinion concurring as to all but footnote 14, in which THOMAS and BREYER, JJ., joined. STEVENS, J., filed a dissenting opinion. ROBERTS, C. J., took no part in the consideration or decision of the case.

NOTICE: This opinion is subject to formal revision before publication in the preliminary print of the United States Reports. Readers are requested to notify the Reporter of Decisions, Supreme Court of the United States, Washington, D. C. 20543, of any typographical or other formal errors, in order that corrections may be made before the preliminary print goes to press.

SUPREME COURT OF THE UNITED STATES

No. 05–1056

MICROSOFT CORPORATION, PETITIONER *v.* AT&T CORP.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

[April 30, 2007]

JUSTICE GINSBURG delivered the opinion of the Court, except as to footnote 14.

It is the general rule under United States patent law that no infringement occurs when a patented product is made and sold in another country. There is an exception. Section 271(f) of the Patent Act, adopted in 1984, provides that infringement does occur when one "supplies . . . from the United States," for "combination" abroad, a patented invention's "components." 35 U. S. C. §271(f)(1). This case concerns the applicability of §271(f) to computer software first sent from the United States to a foreign manufacturer on a master disk, or by electronic transmission, then copied by the foreign recipient for installation on computers made and sold abroad.

AT&T holds a patent on an apparatus for digitally encoding and compressing recorded speech. Microsoft's Windows operating system, it is conceded, has the potential to infringe AT&T's patent, because Windows incorporates software code that, when installed, enables a computer to process speech in the manner claimed by that patent. It bears emphasis, however, that uninstalled

Windows software does not infringe AT&T's patent any more than a computer standing alone does; instead, the patent is infringed only when a computer is loaded with Windows and is thereby rendered capable of performing as the patented speech processor. The question before us: Does Microsoft's liability extend to computers made in another country when loaded with Windows software copied abroad from a master disk or electronic transmission dispatched by Microsoft from the United States? Our answer is "No."

The master disk or electronic transmission Microsoft sends from the United States is never installed on any of the foreign-made computers in question. Instead, copies made abroad are used for installation. Because Microsoft does not export from the United States the copies actually installed, it does not "suppl[y] . . . from the United States" "components" of the relevant computers, and therefore is not liable under §271(f) as currently written.

Plausible arguments can be made for and against extending §271(f) to the conduct charged in this case as infringing AT&T's patent. Recognizing that §271(f) is an exception to the general rule that our patent law does not apply extraterritorially, we resist giving the language in which Congress cast §271(f) an expansive interpretation. Our decision leaves to Congress' informed judgment any adjustment of §271(f) it deems necessary or proper.

I

Our decision some 35 years ago in *Deepsouth Packing Co.* v. *Laitram Corp.*, 406 U. S. 518 (1972), a case about a shrimp deveining machine, led Congress to enact §271(f). In that case, Laitram, holder of a patent on the time-and-expense-saving machine, sued Deepsouth, manufacturer of an infringing deveiner. Deepsouth conceded that the Patent Act barred it from making and selling its deveining machine in the United States, but sought to salvage a

portion of its business: Nothing in United States patent law, Deepsouth urged, stopped it from making in the United States the *parts* of its deveiner, as opposed to the machine itself, and selling those *parts* to foreign buyers for assembly and use abroad. *Id.*, at 522–524.[1] We agreed.

Interpreting our patent law as then written, we reiterated in *Deepsouth* that it was "not an infringement to make or use a patented product outside of the United States." *Id.*, at 527; see 35 U. S. C. §271(a) (1970 ed.) ("[W]hoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent therefor, infringes the patent."). Deepsouth's foreign buyers did not infringe Laitram's patent, we held, because they assembled and used the deveining machines outside the United States. Deepsouth, we therefore concluded, could not be charged with inducing or contributing to an infringement. 406 U. S., at 526–527.[2] Nor could Deepsouth be held liable as a direct infringer, for it did not make, sell, or use the patented invention—the fully assembled deveining machine—within the United States. The parts of the machine were not themselves patented, we noted, hence export of those parts, unassembled, did not rank as an infringement of Laitram's patent. *Id.*, at 527–529.

Laitram had argued in *Deepsouth* that resistance to extension of the patent privilege to cover exported parts

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[1] Deepsouth shipped its deveining equipment "to foreign customers in three separate boxes, each containing only parts of the 1¾-ton machines, yet the whole [was] assemblable in less than one hour." *Deepsouth Packing Co.* v. *Laitram Corp.*, 406 U. S. 518, 524 (1972).

[2] See 35 U. S. C. §271(b) (1970 ed.) ("Whoever actively induces infringement of a patent shall be liable as an infringer."); §271(c) (rendering liable as a contributory infringer anyone who sells or imports a "component" of a patented invention, "knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial non-infringing use").

"derived from too narrow and technical an interpretation of the [Patent Act]." *Id.*, at 529. Rejecting that argument, we referred to prior decisions holding that "a combination patent protects only against the operable assembly of the whole and not the manufacture of its parts." *Id.*, at 528. Congress' codification of patent law, we said, signaled no intention to broaden the scope of the privilege. *Id.*, at 530 ("When, as here, the Constitution is permissive, the sign of how far Congress has chosen to go can come only from Congress."). And we again emphasized that

> "[o]ur patent system makes no claim to extraterritorial effect; these acts of Congress do not, and were not intended to, operate beyond the limits of the United States; and we correspondingly reject the claims of others to such control over our markets." *Id.*, at 531 (quoting *Brown* v. *Duchesne*, 19 How. 183, 195 (1857)).

Absent "a clear congressional indication of intent," we stated, courts had no warrant to stop the manufacture and sale of the parts of patented inventions for assembly and use abroad. 406 U. S., at 532.

Focusing its attention on *Deepsouth*, Congress enacted §271(f). See Patent Law Amendments Act of 1984, §101, 98 Stat. 3383; Fisch & Allen, The Application of Domestic Patent Law to Exported Software: 35 U. S. C. §271(f), 25 U. Pa. J. Int'l Econ. L. 557, 565 (2004) ("Congress specifically intended §271(f) as a response to the Supreme Court's decision in Deepsouth").[3] The provision expands

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[3]See also, *e.g.*, Patent Law Amendments of 1984, S. Rep. No. 98–663, pp. 2–3 (1984) (describing §271(f) as "a response to the Supreme Court's 1972 *Deepsouth* decision which interpreted the patent law not to make it infringement where the final assembly and sale is abroad"); Section-by-Section Analysis of H. R. 6286, 130 Cong. Rec. 28069 (1984) ("This proposal responds to the United States Supreme Court decision in *Deepsouth* . . . concerning the need for a legislative solution to close a loophole in [the] patent law.").

the definition of infringement to include supplying from the United States a patented invention's components:

> "(1) Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.
>
> "(2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer." 35 U. S. C. §271(f).

II

Windows is designed, authored, and tested at Microsoft's Redmond, Washington, headquarters. Microsoft sells Windows to end users and computer manufacturers, both foreign and domestic. Purchasing manufacturers install the software onto the computers they sell. Microsoft sends to each of the foreign manufacturers a master version of Windows, either on a disk or via encrypted electronic transmission. The manufacturer uses the master version to generate copies. Those copies, not the master sent by Microsoft, are installed on the foreign manu-

facturer's computers. Once assembly is complete, the foreign-made computers are sold to users abroad. App. to Pet. for Cert. 45a–46a.[4]

AT&T's patent ('580 patent) is for an apparatus (as relevant here, a computer) capable of digitally encoding and compressing recorded speech. Windows, the parties agree, contains software that enables a computer to process speech in the manner claimed by the '580 patent. In 2001, AT&T filed an infringement suit in the United States District Court for the Southern District of New York, charging Microsoft with liability for domestic and foreign installations of Windows.

Neither Windows software (*e.g.*, in a box on the shelf) nor a computer standing alone (*i.e.*, without Windows installed) infringes AT&T's patent. Infringement occurs only when Windows is installed on a computer, thereby rendering it capable of performing as the patented speech processor. Microsoft stipulated that by installing Windows on its own computers during the software development process, it directly infringed the '580 patent.[5] Microsoft further acknowledged that by licensing copies of Windows to manufacturers of computers sold in the United States, it induced infringement of AT&T's patent.[6] *Id.*, at 42a; Brief for Petitioner 3–4; Brief for Respondent 9, 19.

Microsoft denied, however, any liability based on the master disks and electronic transmissions it dispatched to

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[4]Microsoft also distributes Windows to foreign manufacturers indirectly, by sending a master version to an authorized foreign "replicator"; the replicator then makes copies and ships them to the manufacturers. App. to Pet. for Cert. 45a–46a.

[5]See 35 U. S. C. §271(a) ("[W]hoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.").

[6]See §271(b) ("Whoever actively induces infringement of a patent shall be liable as an infringer.").

foreign manufacturers, thus joining issue with AT&T. By sending Windows to foreign manufacturers, AT&T contended, Microsoft "supplie[d] . . . from the United States," for "combination" abroad, "components" of AT&T's patented speech processor; accordingly, AT&T urged, Microsoft was liable under §271(f). See *supra*, at 5 (reproducing text of §271(f)). Microsoft responded that unincorporated software, because it is intangible information, cannot be typed a "component" of an invention under §271(f). In any event, Microsoft urged, the foreign-generated copies of Windows actually installed abroad were not "supplie[d] . . . from the United States." Rejecting these responses, the District Court held Microsoft liable under §271(f). 71 USPQ 2d 1118 (SDNY 2004). On appeal, a divided panel of the Court of Appeals for the Federal Circuit affirmed. 414 F. 3d 1366 (2005). We granted certiorari, 549 U. S. ___ (2006), and now reverse.

III

A

This case poses two questions: First, when, or in what form, does software qualify as a "component" under §271(f)? Second, were "components" of the foreign-made computers involved in this case "supplie[d]" by Microsoft "from the United States"?[7]

As to the first question, no one in this litigation argues that software can *never* rank as a "component" under §271(f). The parties disagree, however, over the stage at which software becomes a component. Software, the "set of instructions, known as code, that directs a computer to

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[7]The record leaves unclear which paragraph of §271(f) AT&T's claim invokes. While there are differences between §271(f)(1) and (f)(2), see, *e.g.*, *infra*, at 18, n. 18, the parties do not suggest that those differences are outcome determinative. Cf. *infra*, at 14–15, n. 16 (explaining why both paragraphs yield the same result). For clarity's sake, we focus our analysis on the text of §271(f)(1).

perform specified functions or operations," *Fantasy Sports Properties, Inc.* v. *Sportsline.com, Inc.*, 287 F. 3d 1108, 1118 (CA Fed. 2002), can be conceptualized in (at least) two ways. One can speak of software in the abstract: the instructions themselves detached from any medium. (An analogy: The notes of Beethoven's Ninth Symphony.) One can alternatively envision a tangible "copy" of software, the instructions encoded on a medium such as a CD-ROM. (Sheet music for Beethoven's Ninth.) AT&T argues that software in the abstract, not simply a particular copy of software, qualifies as a "component" under §271(f). Microsoft and the United States argue that only a copy of software, not software in the abstract, can be a component.[8]

The significance of these diverse views becomes apparent when we turn to the second question: Were components of the foreign-made computers involved in this case "supplie[d]" by Microsoft "from the United States"? If the relevant components are the copies of Windows actually installed on the foreign computers, AT&T could not persuasively argue that those components, though generated abroad, were "supplie[d] . . . from the United States" as §271(f) requires for liability to attach.[9] If, on the other

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[8]Microsoft and the United States stress that to count as a component, the copy of software must be expressed as "object code." "Software in the form in which it is written and understood by humans is called 'source code.' To be functional, however, software must be converted (or 'compiled') into its machine-usable version," a sequence of binary number instructions typed "object code." Brief for United States as *Amicus Curiae* 4, n. 1; 71 USPQ 2d 1118, 1119, n. 5 (SDNY 2004) (recounting Microsoft's description of the software development process). It is stipulated that object code was on the master disks and electronic transmissions Microsoft dispatched from the United States.

[9]On this view of "component," the copies of Windows on the master disks and electronic transmissions that Microsoft sent from the United States could not themselves serve as a basis for liability, because those copies were not installed on the foreign manufacturers' computers. See §271(f)(1) (encompassing only those components "combin[ed] . . . outside of the United States in a manner that would infringe the patent if such

hand, Windows in the abstract qualifies as a component within §271(f)'s compass, it would not matter that the master copies of Windows software dispatched from the United States were not themselves installed abroad as working parts of the foreign computers.[10]

With this explanation of the relationship between the two questions in view, we further consider the twin inquiries.

B

First, when, or in what form, does software become a "component" under §271(f)? We construe §271(f)'s terms "in accordance with [their] ordinary or natural meaning." *FDIC* v. *Meyer*, 510 U. S. 471, 476 (1994). Section 271(f) applies to the supply abroad of the "components of a patented invention, where *such components* are uncombined in whole or in part, in such manner as to actively induce the combination of *such components*." §271(f)(1) (emphasis added). The provision thus applies only to "such components"[11] as are combined to form the "patented invention" at issue. The patented invention here is AT&T's speech-processing computer.

Until it is expressed as a computer-readable "copy," *e.g.*, on a CD-ROM, Windows software—indeed any software detached from an activating medium—remains uncombinable. It cannot be inserted into a CD-ROM drive or downloaded from the Internet; it cannot be installed or executed on a computer. Abstract software code is an idea

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combination occurred within the United States").

[10]The Federal Circuit panel in this case, relying on that court's prior decision in *Eolas Technologies Inc.* v. *Microsoft Corp.*, 399 F. 3d 1325 (2005), held that software qualifies as a component under §271(f). We are unable to determine, however, whether the Federal Circuit panels regarded as a component software in the abstract, or a copy of software.

[11]"Component" is commonly defined as "a constituent part," "element," or "ingredient." Webster's Third New International Dictionary of the English Language 466 (1981).

without physical embodiment, and as such, it does not match §271(f)'s categorization: "components" amenable to "combination." Windows abstracted from a tangible copy no doubt is information—a detailed set of instructions—and thus might be compared to a blueprint (or anything containing design information, *e.g.*, a schematic, template, or prototype). A blueprint may contain precise instructions for the construction and combination of the components of a patented device, but it is not itself a combinable component of that device. AT&T and its *amici* do not suggest otherwise. Cf. *Pellegrini* v. *Analog Devices, Inc.*, 375 F. 3d 1113, 1117–1119 (CA Fed. 2004) (transmission abroad of instructions for production of patented computer chips not covered by §271(f)).

AT&T urges that software, at least when expressed as machine-readable object code, is distinguishable from design information presented in a blueprint. Software, unlike a blueprint, is "modular"; it is a stand-alone product developed and marketed "for use on many different types of computer hardware and in conjunction with many other types of software." Brief for Respondent 5; Tr. of Oral Arg. 46. Software's modularity persists even after installation; it can be updated or removed (deleted) without affecting the hardware on which it is installed. *Ibid.* Software, unlike a blueprint, is also "dynamic." Tr. of Oral Arg. 46. After a device has been built according to a blueprint's instructions, the blueprint's work is done (as AT&T puts it, the blueprint's instructions have been "exhausted," *ibid.*). Software's instructions, in contrast, are contained in and continuously performed by a computer. Brief for Respondent 27–28; Tr. of Oral Arg. 46. See also *Eolas Technologies Inc.* v. *Microsoft Corp.*, 399 F. 3d 1325, 1339 (CA Fed. 2005) ("[S]oftware code . . . drives the functional nucleus of the finished computer product." (quoting *Imagexpo, L. L. C.* v. *Microsoft Corp.*, 299 F. Supp. 2d 550, 553 (ED Va. 2003))).

The distinctions advanced by AT&T do not persuade us to characterize software, uncoupled from a medium, as a combinable component. Blueprints too, or any design information for that matter, can be independently developed, bought, and sold. If the point of AT&T's argument is that we do not see blueprints lining stores' shelves, the same observation may be made about software in the abstract: What retailers sell, and consumers buy, are *copies* of software. Likewise, before software can be contained in and continuously performed by a computer, before it can be updated or deleted, an actual, physical copy of the software must be delivered by CD-ROM or some other means capable of interfacing with the computer.[12]

Because it is so easy to encode software's instructions onto a medium that can be read by a computer, AT&T intimates, that extra step should not play a decisive role under §271(f). But the extra step is what renders the software a usable, combinable part of a computer; easy or not, the copy-producing step is essential. Moreover, many tools may be used easily and inexpensively to generate the parts of a device. A machine for making sprockets might be used by a manufacturer to produce tens of thousands of sprockets an hour. That does not make the machine a "component" of the tens of thousands of devices in which the sprockets are incorporated, at least not under any ordinary understanding of the term "component." Con-

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[12]The dissent, embracing AT&T's argument, contends that, "unlike a blueprint that merely instructs a user how to do something, software actually causes infringing conduct to occur." *Post*, at 3 (STEVENS, J., dissenting). We have emphasized, however, that Windows can "caus[e] infringing conduct to occur"—*i.e.*, function as part of AT&T's speech-processing computer—only when expressed as a computer-readable copy. Abstracted from a usable copy, Windows code is intangible, uncombinable information, more like notes of music in the head of a composer than "a roller that causes a player piano to produce sound." *Ibid.*

gress, of course, might have included within §271(f)'s compass, for example, not only combinable "components" of a patented invention, but also "information, instructions, or tools from which those components readily may be generated." It did not. In sum, a copy of Windows, not Windows in the abstract, qualifies as a "component" under §271(f).[13]

C

The next question, has Microsoft "supplie[d] . . . from the United States" components of the computers here involved? Under a conventional reading of §271(f)'s text, the answer would be "No," for the foreign-made copies of Windows actually installed on the computers were "supplie[d]" from places outside the United States. The Federal Circuit majority concluded, however, that "for software 'components,' the act of copying is subsumed in the act of 'supplying.'" 414 F. 3d, at 1370. A master sent abroad, the majority observed, differs not at all from the exact copies, easily, inexpensively, and swiftly generated from the master; hence "sending a single copy abroad with the intent that it be replicated invokes §271(f) liability for th[e] foreign-made copies." *Ibid.*; cf. *post*, at 2 (STEVENS, J., dissenting) ("[A] master disk is the functional equivalent of a warehouse of components . . . that Microsoft fully expects to be incorporated into foreign-manufactured computers.").

Judge Rader, dissenting, noted that "supplying" is ordinarily understood to mean an activity separate and dis-

[13] We need not address whether software in the abstract, or any other intangible, can *ever* be a component under §271(f). If an intangible method or process, for instance, qualifies as a "patented invention" under §271(f) (a question as to which we express no opinion), the combinable components of that invention might be intangible as well. The invention before us, however, AT&T's speech-processing computer, is a tangible thing.

tinct from any subsequent "copying, replicating, or reproducing—in effect manufacturing." 414 F. 3d, at 1372–1373 (internal quotation marks omitted); see *id.*, at 1373 ("[C]opying and supplying are separate acts with different consequences—particularly when the 'supplying' occurs in the United States and the copying occurs in Düsseldorf or Tokyo. As a matter of logic, one cannot supply one hundred components of a patented invention without first making one hundred copies of the component . . . ."). He further observed: "The only true difference between making and supplying software components and physical components [of other patented inventions] is that copies of software components are easier to make and transport." *Id.*, at 1374. But nothing in §271(f)'s text, Judge Rader maintained, renders ease of copying a relevant, no less decisive, factor in triggering liability for infringement. See *ibid.* We agree.

Section 271(f) prohibits the supply of components "from the United States . . . in such manner as to actively induce the combination of *such components*." §271(f)(1) (emphasis added). Under this formulation, the very components supplied from the United States, and not copies thereof, trigger §271(f) liability when combined abroad to form the patented invention at issue. Here, as we have repeatedly noted, see *supra*, at 1–2, 5–6, the copies of Windows actually installed on the foreign computers were not themselves supplied from the United States.[14] Indeed, those copies did not exist until they were generated by third parties outside the United States.[15] Copying software

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[14]In a footnote, Microsoft suggests that even a disk shipped from the United States, and used to install Windows directly on a foreign computer, would not give rise to liability under §271(f) if the disk were removed after installation. See Brief for Petitioner 37, n. 11; cf. *post*, at 2–4 (ALITO, J., concurring). We need not and do not reach that issue here.

[15]The dissent analogizes Microsoft's supply of master versions of

abroad, all might agree, is indeed easy and inexpensive. But the same could be said of other items: "Keys or machine parts might be copied from a master; chemical or biological substances might be created by reproduction; and paper products might be made by electronic copying and printing." Brief for United States as *Amicus Curiae* 24. See also *supra*, at 11–12 (rejecting argument similarly based on ease of copying in construing "component"). Section 271(f) contains no instruction to gauge when duplication is easy and cheap enough to deem a copy in fact made abroad nevertheless "supplie[d] . . . from the United States." The absence of anything addressing copying in the statutory text weighs against a judicial determination that replication abroad of a master dispatched from the United States "supplies" the foreign-made copies from the United States within the intendment of §271(f).[16]

Windows abroad to "the export of an inventory of . . . knives to be warehoused until used to complete the assembly of an infringing machine." *Post*, at 2. But as we have underscored, foreign-made copies of Windows, not the masters Microsoft dispatched from the United States, were installed on the computers here involved. A more apt analogy, therefore, would be the export of knives for *copying* abroad, with the foreign-made *copies* "warehoused until used to complete the assembly of an infringing machine." *Ibid.* Without stretching §271(f) beyond the text Congress composed, a copy made entirely abroad does not fit the description "supplie[d] . . . from the United States."

[16] Our analysis, while focusing on §271(f)(1), is equally applicable to §271(f)(2). But cf. *post*, at 1 (STEVENS, J., dissenting) (asserting "paragraph (2) . . . best supports AT&T's position here"). While the two paragraphs differ, among other things, on the quantity of components that must be "supplie[d] . . . from the United States" for liability to attach, see *infra*, at 18, n. 18, that distinction does not affect our analysis. Paragraph (2), like (1), covers only a "component" amenable to "combination." §271(f)(2); see *supra*, at 9–12 (explaining why Windows in the abstract is not a combinable component). Paragraph (2), like (1), encompasses only the "[s]uppl[y] . . . from the United States" of "such [a] component" as will itself "be combined outside of the United States." §271(f)(2); see *supra*, at 12–13 and this page (observing that foreign-made copies of Windows installed on computers abroad were

D

Any doubt that Microsoft's conduct falls outside §271(f)'s compass would be resolved by the presumption against extraterritoriality, on which we have already touched. See *supra*, at 2, 4. The presumption that United States law governs domestically but does not rule the world applies with particular force in patent law. The traditional understanding that our patent law "operate[s] only domestically and d[oes] not extend to foreign activities," Fisch & Allen, *supra*, at 559, is embedded in the Patent Act itself, which provides that a patent confers exclusive rights in an invention within the United States. 35 U. S. C. §154(a)(1) (patentee's rights over invention apply to manufacture, use, or sale "throughout the United States" and to importation "into the United States"). See *Deepsouth*, 406 U. S., at 531 ("Our patent system makes no claim to extraterritorial effect"; our legislation "d[oes] not, and [was] not intended to, operate beyond the limits of the United States, and we correspondingly reject the claims of others to such control over our markets." (quoting *Brown*, 19 How., at 195)).

As a principle of general application, moreover, we have stated that courts should "assume that legislators take account of the legitimate sovereign interests of other nations when they write American laws." *F. Hoffmann-La Roche Ltd* v. *Empagran S. A.*, 542 U. S. 155, 164 (2004); see *EEOC* v. *Arabian American Oil Co.*, 499 U. S. 244, 248 (1991). Thus, the United States accurately conveyed in this case: "Foreign conduct is [generally] the domain of foreign law," and in the area here involved, in particular, foreign law "may embody different policy judgments about the relative rights of inventors, competitors, and the pub-

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not "supplie[d] . . . from the United States"). It is thus unsurprising that AT&T does not join the dissent in suggesting that the outcome might turn on whether we view the case under paragraph (1) or (2).

lic in patented inventions." Brief for United States as *Amicus Curiae* 28. Applied to this case, the presumption tugs strongly against construction of §271(f) to encompass as a "component" not only a physical copy of software, but also software's intangible code, and to render "supplie[d] . . . from the United States" not only exported copies of software, but also duplicates made abroad.

AT&T argues that the presumption is inapplicable because Congress enacted §271(f) specifically to extend the reach of United States patent law to cover certain activity abroad. But as this Court has explained, "the presumption is not defeated . . . just because [a statute] specifically addresses [an] issue of extraterritorial application," *Smith* v. *United States*, 507 U. S. 197, 204 (1993); it remains instructive in determining the *extent* of the statutory exception. See *Empagran*, 542 U. S., at 161–162, 164–165; *Smith*, 507 U. S., at 204.

AT&T alternately contends that the presumption holds no sway here given that §271(f), by its terms, applies only to domestic conduct, *i.e.*, to the supply of a patented invention's components "from the United States." §271(f)(1). AT&T's reading, however, "converts a single act of supply from the United States into a springboard for liability each time a copy of the software is subsequently made [abroad] and combined with computer hardware [abroad] for sale [abroad.]" Brief for United States as *Amicus Curiae* 29; see 414 F. 3d, at 1373, 1375 (Rader, J., dissenting). In short, foreign law alone, not United States law, currently governs the manufacture and sale of components of patented inventions in foreign countries. If AT&T desires to prevent copying in foreign countries, its remedy today lies in obtaining and enforcing foreign patents. See *Deepsouth*, 406 U. S., at 531.[17]

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[17] AT&T has secured patents for its speech processor in Canada, France, Germany, Great Britain, Japan, and Sweden. App. in No. 04–

IV

AT&T urges that reading §271(f) to cover only those copies of software actually dispatched from the United States creates a "loophole" for software makers. Liability for infringing a United States patent could be avoided, as Microsoft's practice shows, by an easily arranged circumvention: Instead of making installation copies of software in the United States, the copies can be made abroad, swiftly and at small cost, by generating them from a master supplied from the United States. The Federal Circuit majority found AT&T's plea compelling:

> "Were we to hold that Microsoft's supply by exportation of the master versions of the Windows® software—specifically for the purpose of foreign replication—avoids infringement, we would be subverting the remedial nature of §271(f), permitting a technical avoidance of the statute by ignoring the advances in a field of technology—and its associated industry practices—that developed after the enactment of §271(f). . . . Section §271(f), if it is to remain effective, must therefore be interpreted in a manner that is appropriate to the nature of the technology at issue." 414 F. 3d, at 1371.

While the majority's concern is understandable, we are not persuaded that dynamic judicial interpretation of §271(f) is in order. The "loophole," in our judgment, is properly left for Congress to consider, and to close if it finds such action warranted.

There is no dispute, we note again, that §271(f) is inapplicable to the export of design tools—blueprints, schemat-

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1285 (CA Fed.), p. 1477. AT&T and its *amici* do not relate what protections and remedies are, or are not, available under these foreign regimes. Cf. Brief for Respondent 46 (observing that "foreign patent protections are *sometimes* weaker than their U. S. counterparts" (emphasis added)).

ics, templates, and prototypes—all of which may provide the information required to construct and combine overseas the components of inventions patented under United States law. See *supra*, at 10–12. We have no license to attribute to Congress an unstated intention to place the information Microsoft dispatched from the United States in a separate category.

Section 271(f) was a direct response to a gap in our patent law revealed by this Court's *Deepsouth* decision. See *supra*, at 4, and n. 3. The facts of that case were undeniably at the fore when §271(f) was in the congressional hopper. In *Deepsouth*, the items exported were kits containing all the physical, readily assemblable parts of a shrimp deveining machine (not an intangible set of instructions), and those parts themselves (not foreign-made copies of them) would be combined abroad by foreign buyers. Having attended to the gap made evident in *Deepsouth*, Congress did not address other arguable gaps: Section 271(f) does not identify as an infringing act conduct in the United States that facilitates making a component of a patented invention outside the United States; nor does the provision check "suppl[ying] . . . from the United States" information, instructions, or other materials needed to make copies abroad.[18] Given that Congress did not home in on the loophole AT&T describes, and in view of the expanded extraterritorial thrust AT&T's reading of §271(f) entails, our precedent leads us to leave in Congress' court the patent-protective determination AT&T

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[18]Section 271(f)'s text does, in one respect, reach past the facts of *Deepsouth*. While Deepsouth exported kits containing *all* the parts of its deveining machines, §271(f)(1) applies to the supply abroad of "all or a substantial portion of" a patented invention's components. And §271(f)(2) applies to the export of even a single component if it is "especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use."

seeks. Cf. *Sony Corp. of America* v. *Universal City Studios, Inc.*, 464 U. S. 417, 431 (1984) ("In a case like this, in which Congress has not plainly marked our course, we must be circumspect in construing the scope of rights created by a legislative enactment which never contemplated such a calculus of interests.").

Congress is doubtless aware of the ease with which software (and other electronic media) can be copied, and has not left the matter untouched. In 1998, Congress addressed "the ease with which pirates could copy and distribute a copyrightable work in digital form." *Universal City Studios, Inc.* v. *Corley*, 273 F. 3d 429, 435 (CA2 2001). The resulting measure, the Digital Millennium Copyright Act, 17 U. S. C. §1201 *et seq.*, "backed with legal sanctions the efforts of copyright owners to protect their works from piracy behind digital walls such as encryption codes or password protections." *Universal City Studios*, 273 F. 3d, at 435. If the patent law is to be adjusted better "to account for the realities of software distribution," 414 F. 3d, at 1370, the alteration should be made after focused legislative consideration, and not by the Judiciary forecasting Congress' likely disposition.

* * *

For the reasons stated, the judgment of the Court of Appeals for the Federal Circuit is

Reversed.

THE CHIEF JUSTICE took no part in the consideration or decision of this case.

SUPREME COURT OF THE UNITED STATES

No. 05–1056

MICROSOFT CORPORATION, PETITIONER *v.*
AT&T CORP.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

[April 30, 2007]

JUSTICE ALITO, with whom JUSTICE THOMAS and JUSTICE BREYER join, concurring as to all but footnote 14.

I agree with the Court that no "component[s]" of the foreign-made computers involved in this case were "supplie[d]" by Microsoft "from the United States." 35 U. S. C. §271(f)(1). I write separately because I reach this conclusion through somewhat different reasoning.

I

Computer programmers typically write programs in a "human readable" programming language. This "'source code'" is then generally converted by the computer into a "machine readable code" or "machine language" expressed in a binary format. Brief for Respondent 5, n. 1 (citing R. White, How Computers Work 87, 94 (8th ed. 2006)); E. Walters, Essential Guide to Computing 204–205 (2001). During the Windows writing process, the program exists in the form of machine readable code on the magnetic tape fields of Microsoft's computers' hard drives. White, *supra,* at 144–145; Walters, *supra,* at 54–55.

When Microsoft finishes writing its Windows program in the United States, it encodes Windows onto CD-ROMs known as "'golden masters'" in the form of machine readable code. App. 31, ¶4. This is done by engraving each disk in a specific way such that another computer can read

the engravings, understand what they mean, and write the code onto the magnetic fields of its hard drive. *Ibid.*; Brief for Petitioner 4, n. 2.

Microsoft ships these disks (or sends the code via electronic transmission) abroad, where the code is copied onto other disks that are then placed into foreign-made computers for purposes of installing the Windows program. App. 31–32, ¶¶5–8. No physical aspect of a Windows CD-ROM—original disk or copy—is ever incorporated into the computer itself. See *Stenograph L. L. C.* v. *Bossard Assocs., Inc.*, 144 F. 3d 96, 100 (CADC 1998) (noting that, within the context of the Copyright Act, "installation of software onto a computer results in 'copying'"); White, *supra*, at 144–145, 172–173. The intact CD-ROM is then removed and may be discarded without affecting the computer's implementation of the code.* The parties agree for purposes of this litigation that a foreign-made computer containing the Windows code would violate AT&T's patent if present in the United States. Pet. for Cert. 42a, ¶5.

II

A

I agree with the Court that a component of a machine, whether a shrimp deveiner or a personal computer, must be something physical. *Ante*, at 9–11. This is because the word "component," when concerning a physical device, is most naturally read to mean a physical part of the device. See Webster's Third New International Dictionary 466 (1976) (component is a "constituent part: INGREDIENT"); Random House Dictionary of the English Language 301

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*In a sense, the whole process is akin to an author living prior to the existence of the printing press, who created a story in his mind, wrote a manuscript, and sent it to a scrivener, who in turn copied the story by hand into a blank book.

(1967) (component is "a component part; constituent"). Furthermore, §271(f) requires that the component be "combined" with other components to form the infringing device, meaning that the component must remain a part of the device. Webster's, *supra*, at 452 (combine means "to join in physical or chemical union"; "to become one"; "to unite into a chemical compound"); Random House, *supra*, at 293 (combine means "to bring or join into a close union or whole"). For these reasons, I agree with the Court that a set of instructions on how to build an infringing device, or even a template of the device, does not qualify as a component. *Ante*, at 9–10.

B

As the parties agree, an inventor can patent a machine that carries out a certain process, and a computer may constitute such a machine when it executes commands—given to it by code—that allow it to carry out that process. Such a computer would not become an infringing device until enough of the code is installed on the computer to allow it to execute the process in question. The computer would not be an infringing device prior to the installation, or even during the installation. And the computer remains an infringing device after the installation process because, even though the original installation device (such as a CD-ROM) has been removed from the computer, the code remains on the hard drive.

III

Here, Windows software originating in the United States was sent abroad, whether on a master disk or by means of an electronic transmission, and eventually copied onto the hard drives of the foreign-made computers. Once the copying process was completed, the Windows program was recorded in a physical form, *i.e.*, in magnetic fields on the computers' hard drives. See Brief for Respondent 5. The physical form of the Windows program on

the master disk, *i.e.*, the engravings on the CD-ROM, remained on the disk in a form unchanged by the copying process. See Brief for Petitioner 4, n. 2 (citing White, How Computers Work, at 144–145, 172–173). There is nothing in the record to suggest that any physical part of the disk became a physical part of the foreign-made computer, and such an occurrence would be contrary to the general workings of computers.

Because no physical object originating in the United States was combined with these computers, there was no violation of §271(f). Accordingly, it is irrelevant that the Windows software was not copied onto the foreign-made computers *directly* from the master disk or from an electronic transmission that originated in the United States. To be sure, if these computers could not run Windows without inserting and keeping a CD-ROM in the appropriate drive, then the CD-ROMs might be components of the computer. But that is not the case here.

* * *

Because the physical incarnation of code on the Windows CD-ROM supplied from the United States is not a "component" of an infringing device under §271(f), it logically follows that a copy of such a CD-ROM also is not a component. For this reason, I join the Court's opinion, except for footnote 14.

SUPREME COURT OF THE UNITED STATES

No. 05–1056

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AT&T CORP.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

[April 30, 2007]

JUSTICE STEVENS, dissenting.

As the Court acknowledges, "[p]lausible arguments can be made for and against extending §271(f) to the conduct charged in this case as infringing AT&T's patent." *Ante*, at 2. Strong policy considerations, buttressed by the presumption against the application of domestic patent law in foreign markets, support Microsoft Corporation's position. I am, however, persuaded that an affirmance of the Court of Appeals' judgment is more faithful to the intent of the Congress that enacted §271(f) than a reversal.

The provision was a response to our decision in *Deepsouth Packing Co.* v. *Laitram Corp.*, 406 U. S. 518 (1972), holding that a patent on a shrimp deveining machine had not been infringed by the export of components for assembly abroad. Paragraph (1) of §271(f) would have been sufficient on its own to overrule *Deepsouth*,* but it is paragraph (2) that best supports AT&T's position here. It

*"Whoever without authority supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer." 35 U. S. C. §271(f)(1).

provides:

> "Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer." §271(f)(2).

Under this provision, the export of a specially designed knife that has no use other than as a part of a patented deveining machine would constitute infringement. It follows that §271(f)(2) would cover the export of an inventory of such knives to be warehoused until used to complete the assembly of an infringing machine.

The relevant component in this case is not a physical item like a knife. Both Microsoft and the Court think that means it cannot be a "component." See *ante*, at 10. But if a disk with software inscribed on it is a "component," I find it difficult to understand why the most important ingredient of that component is not also a component. Indeed, the master disk is the functional equivalent of a warehouse of components—components that Microsoft fully expects to be incorporated into foreign-manufactured computers. Put somewhat differently: On the Court's view, Microsoft could be liable under §271(f) only if it sends individual copies of its software directly from the United States with the intent that each copy would be incorporated into a separate infringing computer. But it seems to me that an indirect transmission via a master disk warehouse is likewise covered by §271(f).

I disagree with the Court's suggestion that because software is analogous to an abstract set of instructions, it cannot be regarded as a "component" within the meaning of §271(f). See *ante*, at 9–10. Whether attached or detached from any medium, software plainly satisfies the dictionary definition of that word. See *ante*, at 9, n. 11 (observing that "'[c]omponent' is commonly defined as 'a constituent part,' 'element,' or 'ingredient'"). And unlike a blueprint that merely instructs a user how to do something, software actually causes infringing conduct to occur. It is more like a roller that causes a player piano to produce sound than sheet music that tells a pianist what to do. Moreover, it is surely not "a staple article or commodity of commerce suitable for substantial noninfringing use" as that term is used in §271(f)(2). On the contrary, its sole intended use is an infringing use.

I would therefore affirm the judgment of the Court of Appeals.